

## IN THE UNITED STATES PATENT &amp; TRADEMARK OFFICE

RE: Application No.10/802,817

Filed 03/18/2004

Applicant: Richard T. RYAN

TITLE: Swimming Pool Immersed Light Fixture

Examiner: Khoa D.Huynh

Art Unit: 3751

**DECLARATION**

I, Richard T. Ryan, a Canadian citizen residing at Stouffville, Ontario, Canada, hereby Declare and state that:

1. I am the above-named inventor of the subject Application for Patent;
2. I have worked continuously in the swimming pool industry in Canada and the United States since 1969, commencing in pool construction and progressing into pool system servicing.
3. For several months of each year I reside in Crystal River, Florida, from where I pursue my business in the U.S. pool trade.
4. I started my own pool company in 1980, doing construction, service, renovation and system design. Being in the industry, I hear all the pros and cons, good things and complaints both from people in the industry and from the users.
5. In the 1980's industry service people were complaining about not having an adequate type of vacuum machine to properly install vinyl liners in pools, so I invented and patented such a machine, calling it the 'Vinyl Vac' —US Patent No. 5713164. "Pool liner Installation System".
6. I have also brought other products to the pool industry, including an adhesive and filler type repair kit for plastics, vinyl and metal pool structures (consisting of Cyanoacrylate & Glass beads), identified as 'Pool Fix 2000', Trademark Reg. # 2,937,686 Ser.# 78-220,699.
7. For many years I heard complaints of how the Aqualuminator (T.M.) light for above-ground

pools, [the rotary, slotted annular "Aqualuminator" (T.M.) jet arrangement of Vajda et al (US 5,207,499)] generated unduly high back-pressure that restricted the flow of water and noticeably hampered the functioning of the associated water filtration system.

8. Consequently, I invented a submersible light for above-ground pools that would not impinge on the operation of the water return fixture, and would not restrict the water flow rate of the system or unduly load the pump; it also could add color to the pool lights, by the use of LED lights. This also enabled me to provide a slender housing that would not protrude unduly from the pool wall; a housing supported by but separate from the return flow fitting.

9. It should be readily recognized that major differences exist between the prior combination nozzle/light arrangement of Vajda et al, having a single return flow fitting with an annular rotary slotted discharge nozzle surrounding a centrally located light, and my arrangement wherein the pool illumination light housing is supported by but separate from the return flow fitting.

10. As a consequence, the return flow is not impeded by the presence of a light fixture; and there is virtually no size limitation on the transverse size of the light assembly. This, in turn facilitates the adoption of low voltage LED lighting, with its associated capability to provide coloured lights, including colour variations.

11. The use of LED lighting and its associated low voltage supply constitutes a significant improvement in terms of both safety and convenience. High voltage lighting, such as household voltage of 115 Volts operating in a wet environment constitutes a severe safety hazard, even with the adoption of ground-fault protection. The servicing or replacement of a lamp, such as that of Vajda et al's Aqualuminator (T.M.) requires the lowering of the pool surface level below the lamp fixture or the plugging of the pool wall hole.

In contrast, the 12-volt DC supply generally used with LED lights constitutes absolutely no

electrical threat, and the waterproofed, sealed fixture can be safely removed from a submerged lamp housing, and surfaced for servicing. The provision of a 'free' length of power cord, located within my fixture, greatly facilitates this servicing action.

12. My separation of the lamp housing from the functions of the return fitting enables the use of an independently adjustable eyeball-type nozzle. This nozzle can be readily removed, and an eyeball nozzle with a different sized nozzle orifice can be substituted.

13. My provision of a lighting fixture supported by, but externally off-set from the return line fitting, together with the single-flange fixture mounting of the return line fitting, enables ready and rapid rotational adjustment of the return line fitting about its polar axis, which results in rotational re-orientation of the light fitting about that axis. Thus the light housing can be initially positioned or subsequently readjusted to a sideways or an upside down configuration, relative to the water inlet fitting. The fittings of Vajda and Ruthenberg are incapable of such adjustment.

14. A further, and perhaps unobvious advantage of my present arrangement is that its use of an eyeball fitting enables the ready removal of the eyeball and its retaining ring, so as to access the (pool industry) standard 1½ inch female threaded interior pipe fitting, for the attachment of a water fountain or an automatic pool cleaner, which may be required. In contrast, Vajda (Aqualuminator) fittings require the use of special adaptors for the purpose of making such external connections. Further, Declarant sayeth not.

Signed at Stouffville, Province of Ontario, this tenth day of February, 2006.

Richard T Ryan

